

AMENDMENTS TO THE SPECIFICATION:

On page 1, after the title and before the first paragraph of the specification, please insert the following new headings on two new separate lines:

BACKGROUND

1. **Technical Field**

Please insert the following new heading on page 1, line 7:

2. **Related Art**

Please replace the paragraph beginning on page 1, line 16 with the following amended paragraph:

Web services can be considered as a collection of functions which have been packaged together and published to a network for use by clients within the network. They provide the building blocks for creating open distributed systems, and as such any number of Web services can be combined to form more complicated, higher level service. Today, Web services are used to enable communication between computers in the form of messaging and RPC mechanisms across IP networks. Essentially, the advantages of Web services over other distributed computing arrangements are that they are particularly suited for heterogeneous environments such as the internet. The reason for this is that the Web services use an XML-based communication protocol which is light weight and easily understandable by all of the various different Web services. In addition, the Web services operate by transmitting communication messages using any underlying network communication protocols, but in particular use HTTP which is ubiquitous throughout the internet. The advantages of Web services in the use of HTTP transport and XML

encoding which are supported by many computing platforms such as ~~Java and Microsoft~~ JAVA
and MICROSOFT. One example of a Web service is ~~Microsoft passport~~ MICROSOFT
PASSPORT (an authentication service hosted by ~~Microsoft~~ MICROSOFT).

Please replace the paragraph beginning on page 2, line 11 with the following amended paragraph:

Earlier ~~British Telecommunications~~ BRITISH TELECOMMUNICATIONS patent application PCT/GB02/03981 is directed towards a system which overcomes some of the limitations encountered in distributed computing. In particular, the system address the problems which can arise between a client-sever relationship when one or more clients overuse the capabilities of the servers, and solve these using the compulsory download of a client side intermediary which acts to control the call rates allowed to the server. This thereby prevents the server from overuse by throttling back the call rate in the event that the server becomes congested, and offering better load control of the services offered by the servers. However, this system is directed towards a single client-sever relationship, and as such does not address the problems encountered in a multi-sever environment of high availability Web services, in which duplicate Web services are operated on several different servers. In particular, the failover capability should one of the servers or Web services fail is not addressed.

Please replace the paragraph beginning on page 3, line 27 and continuing to page 4, line 8, with the following amended paragraph:

This procedure of "binding", linking the WSDL to URL and then to IP address, is maintained throughout the lifecycle of the client, unless the client specifically demands a re-bind. In this case, all further calls to the service are performed without reference again to the WSDL. If the server becomes congested or fails then the client only notices when it tries to send a SOAP message to the server and the process eventually fails. In this case, if the WSDL has multiple service names and ports specified, then the client can attempt to rebind to another one. However, even if achieved this will have caused a disruption to the service offered to the client. In addition, if the client has not been programmed to cater for such a condition, then the client will fail. In addition to the problems encountered during failure of a server, no distribution of loading is carried out since the client will only send SOAP requests to one server (service port) unless the client is forced to rebind before it sends every message. However, such dynamic rebinding would require special programming by the client and in some cases the Web services SDK (software development kit) supplied with ~~Net or Java~~ .NET or JAVA may not support it. In some cases, Web service bindings may last for longer than the planned SOAP server uptime, thus when a server is taken down for maintenance the client will suffer failed responses.

Please insert the following new heading on page 4, line 15:

SUMMARY

Please replace the paragraph (sentence) at page 4, line 16 with the following amended paragraph (sentence):

The present invention seeks to ~~mitigate the~~ mitigate some disadvantages of the prior art.

Please insert the following new heading on page 6, before line 1:

BRIEF DESCRIPTION OF THE DRAWINGS

Please insert the following new heading on page 6, line 6:

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

Please replace the paragraph beginning on page 10, line 22 with the following amended paragraph:

In the specific embodiment described, proxy 30 is delivered as a ~~software~~-software package comprising ~~Java classes~~-JAVA classes that run on JDK 1.3 JVM and above, and supports current standards WSDL 1.1 and SOAP 1.1. A standard SDK 29 allows the application developer to program in any language but access Web services ~~through~~-through simple commands. In the embodiment, the JAX-RPC 0.9 and ~~Microsoft~~-MICROSOFT SOAP Toolkits provide this functionality. Configuration file 33 holds authentication details for connecting to servers using HTTP Basic Authentication for inclusion within the SOAP messages as WSSE security credential.

Please replace the paragraph beginning on page 10, line 31 with the following amended paragraph:

The server side of the system is implemented using Web servers or J2EE components, though ~~.Net servers~~-.NET servers and IIS could be used. In the embodiment, the servers are running on a client driven basis in the sense that they only respond to the external polling mechanism from either the proxy 30 or alternatively from a server side monitor thread 41.

Before the listing of the claims, at the top of page 15 of the specification, please delete the word "CLAIMS" and insert therefore --WHAT IS CLAIMED IS:--